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10/565,422

11/30/2006

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EXAMINER

MAI, TIEN HUNG

ART UNIT

PAPER NUMBER

2836

MAIL DATE

DELIVERY MODE

04/28/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 10/565,422 | Applicant(s) SHATO ET AL. | |
| | Examiner TIEN MAI | Art Unit 2836 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 7-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>04/18/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Application number 10/565422 for "Surge Protector" filed on 11/30/2006 has been examined.

Election/Restrictions

2. Restriction to one of the following inventions is required under 35 USC 121:
 - a. Claims 1-6, drawn to a surge protector, classified in class 361, subclass 120.
 - b. Claims 7-11, drawn to method of forming a surge protector, classified in class 337, subclass 18 and 20.
3. The inventions are distinct, each from the other because of the following reasons:
4. Inventions a, and b are related as product and process of making the product: the inventions can be shown to be distinct if either or both of the following can be shown: (1) the process of making the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of making that product. See MPEP 806.05 (h). In the instant case of invention a, and b, the invention a (surge protector) can be made using a substantially different heating process.
5. Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions require a different field of search (see MPEP 808.02), restriction for examination purposes as indicated is proper.

6. The examiner has required restriction between product and process claims.

Where applicant elects claims directed to the product and the product claims are subsequently found allowable, withdrawn process claims that depend from or otherwise require all the limitations of the allowable product claim will be considered for rejoinder. All claims directed to a nonelected process invention must require all the limitations of an allowable product claim for that process invention to be rejoined.

7. In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirement of 35 USC 101, 102, 103 and 112. Until all claims to the elected product are found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowable product claim will not be rejoined. See MPEP 821.04(b). Additionally, in order to retain the right to rejoinder in accordance with the above policy, applicant is advised that the process claims should be amended during prosecution to require the limitations of the product claims. Failure to do so may result in a loss of the right to rejoinder. Further, note that the prohibition against double patenting rejections of 35 USC 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP 804.01.

8. Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species to be examined even though the requirement may be

traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

9. The election of the species may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed error in the election of species requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after election, applicant must indicate which of these claims are readable on the elected species.

10. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the species unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C 103(a) or the other species.

11. Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141.

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12. During a telephone conversation with Louis J. DelJuidice on April 24, 2008 a provisional election was made **without traverse** to prosecute the invention of a, claims 1-6. Affirmation of this election must be made by applicant in replying to this Office action. Claims 7-11 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Objections

13. Claim 2, it is not clear what is meant by "blazing". The term "blazing" is not clear because it is not engineering term. Normally blazing stand for heating to high temperature. For purpose of examination, the examiner interprets as "heating to high temperature".

14. Claims 4 and 6, please change "Cr" in line 2 to "Chromium".

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 1, 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. (US 5,506,071 "Tanaka").

17. **In re claim 1**, Tanaka discloses sealing electrode and surge absorber using the same; the apparatus comprising: an insulating member (13b) having a conductive film

(13a) divided by a discharge gap (13c) interposed therebetween; a pair of main discharge electrode members (11 and 12) opposite to each other; an insulating tube (10) fitted to the pair of main discharge electrode members opposite to each other to seal both the insulating member and a sealing gas (14) inside thereof; and oxide films (11c) formed on main discharge surfaces of the pair of main discharge electrode members by performing an oxidation treatment (col. 5, lines 17-25; and see fig. 1).

18. Tanaka discloses the claimed invention except for the main discharge electrode members contacting the conductive film. Tanaka rather discloses a cap electrode is being disposed in between the main discharge electrode members and the conductive film. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to eliminate the cap electrode, since it has been held that omission of an element and its function in a combination where the remaining elements perform the same function as before involves only routine skill in the art. *In re Karlson*, 136 USPQ 184.

19. **In re claim 3**, although Tanaka does not explicitly disclose each of the oxide films has an average thickness in the range of 0.01 to 2.0 micron, this is viewed to be optimum value, which is dependent upon the operating condition and design requirement. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the device of Tanaka by setting oxide film thickness to some specific value, since when the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. See *In re Aller*, 220, F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

20. **In re claim 4**, Tanaka discloses that the main discharge electrode members contain Chromium enriched on the surface of the oxide films (col. 5, line 66 – col. 6, line 5).

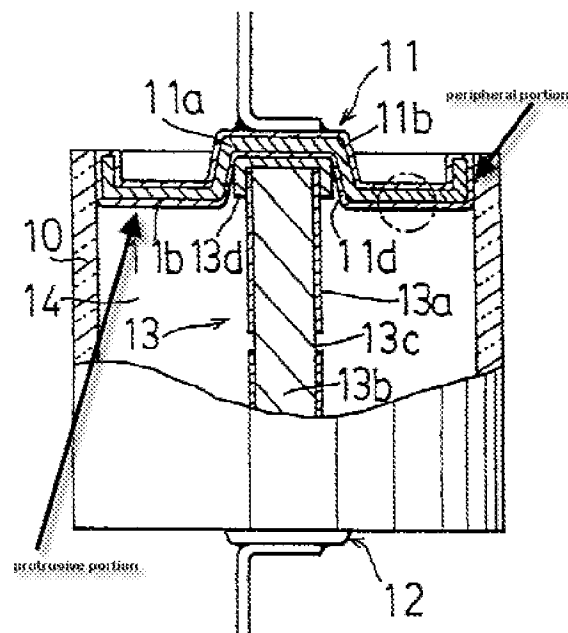
21. Claims 2, 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka in view of Shigemori et al. (US 4,410,831 “Shigemori”).

22. **In re claim 2**, Tanaka discloses sealing electrode and surge absorber using the same; the apparatus comprising: a column-shaped (col. 3, lines 64-65) insulating member (13b) having a conductive film (13a) divided by a discharge gap (13c) interposed in an intermediate of a peripheral surface; a pair of main discharge electrode members (11 and 12) opposite to each other on both ends of the insulating member; an insulating tube (10) fitted to the pair of main discharge electrode members opposite to each other to seal both the insulating member and a sealing gas (14) inside thereof, wherein the main discharge electrode members comprise (see reproduced figure below): peripheral portions attached to the insulating tube by heating to high temperature with filler metal (col. 5, lines 17-25); protrusive supporting portions protruding toward an inside and an axial direction of the insulating tube and supporting the insulating member in the radial inner surface thereof; and oxide film (11c) formed on main discharge surfaces of the protrusive supporting portions of the pair of main discharge electrode members opposite to each other, by performing an oxidation treatment (col. 5, lines 17-25).

23. Tanaka discloses the claimed invention except for the main discharge electrode members contacting the conductive film. Tanaka rather discloses a cap electrode is being disposed in between the main discharge electrode members and the conductive

film. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to eliminate the cap electrode, since it has been held that omission of an element and its function in a combination where the remaining elements perform the same function as before involves only routine skill in the art. *In re Karlson*, 136 USPQ 184.

24. Tanaka does not explicitly disclose the peripheral portions attached to end faces of the insulating tube. In the same field of endeavor, Shigemori discloses peripheral portions of discharge electrode members attached to end faces of an insulating tube (1) (see fig. 1). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the device of Tanaka and employ the peripheral portions of the discharge electrode members attached to end faces of the insulating tube, as taught by Shigemori, in order to keep the insulating tube in place.



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25. **In re claim 5**, although Tanaka does not explicitly disclose each of the oxide films has an average thickness in the range of 0.01 to 2.0 micron, this is viewed to be optimum value, which is dependent upon the operating condition and design requirement. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the device of Tanaka by setting oxide film thickness to some specific value, since when the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. See *In re Aller*, 220, F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

26. **In re claim 6**, Tanaka discloses that the main discharge electrode members contain Chromium enriched on the surface of the oxide films (col. 5, line 66 – col. 6, line 5).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIEN MAI whose telephone number is (571)270-1277. The examiner can normally be reached on M-Th: 7:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on 571-272-2084. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

/Michael J Sherry/
Supervisory Patent Examiner, Art Unit 2836

/Tien Mai/
Examiner, Art Unit 2836